Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Ultra Low Sulfur Diesel  
CAS Number: 68476-34-6  
Synonyms: Ultra Low Sulfur Diesel, ULSD, S 15 Diesel  
Description: Yellow-Green color with distinct hydrocarbon odor  
Product use: Motor fuel  
Manufacturer or Distributor: Lion Oil Co., 1000 McHenry St., El Dorado, AR 71730; (870) 862-8111  
24-hr Emergency Phone Number: “FOR CHEMICAL EMERGENCY” Spill, Leak, Fire, Exposure or Accident  
CALL CHEMTREC – Day or Night 800-424-9300  
MSDS CONTACT: Beverly McFarland – 870-864-1306

Section 2 - Hazards Identification

Emergency Overview

Combustible liquid, moderate fire hazard  
May cause moderate eye and skin irritation  
Long term, prolonged or repeated skin contact may increase the risk of skin cancer  
Harmful or fatal if swallowed – can enter lungs and cause damage  
May be harmful if absorbed through skin

Potential Health Effects

Primary Entry Routes: Skin and/or Eye Contact, Ingestion, Inhalation,  
Target Organs: Skin, Eyes, Central Nervous System  
Carcinogenicity: IARC has classified diesel fuel as a group 2B carcinogen, sufficient evidence in animals, possibly carcinogenic to humans. Prolonged or repeated contact with this material can cause cancer. Contains Polynuclear aromatics, which has been designated as a carcinogen by IARC (group 1). Risk of cancer depends on duration and level of exposure. IARC has classified diesel engine exhaust as a group 2A carcinogen, sufficient evidence in animals, probably carcinogenic to humans.  

Acute Effects

Eye: May cause irritation of the eye.  
Skin: Excessive skin contact may cause irritation and dermatitis.  
Inhalation: Irritation, dizziness, headaches, and nausea. Excessive breathing may cause central nervous system effects.  
Ingestion: Do Not Induce Vomiting. Causes nausea, vomiting, and cramping; depression of central nervous system ranging from mild headache to anesthesia, coma, and death; pulmonary irritation secondary to exhalation of solvent; signs of kidney and liver damage may be delayed. Aspiration into lungs, causes severe lung irritation with coughing, gagging, dyspnea, substernal distress, and rapidly developing pulmonary edema; later, signs of bronchopneumonia and pneumonitis; acute onset of central nervous system excitement followed by depression.  

Chronic Effects

Prolonged or repeated contact with this material can cause cancer. IARC has classified diesel fuel as a group 2B carcinogen, sufficient evidence in animals, possibly carcinogenic to humans. Contains Polynuclear aromatics, which has been designated as a carcinogen by IARC (group 1). Risk of cancer depends on duration and level of exposure.  

Section Ref. (3, 10)
GHS CLASSIFICATION

<table>
<thead>
<tr>
<th>Hazard class</th>
<th>Hazard Category</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combustible Liquid</td>
<td>Category 4</td>
<td>H227</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Category 1</td>
<td>H304</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
<td>H350</td>
</tr>
<tr>
<td>Acute toxicity, inhalation</td>
<td>Category 4</td>
<td>H332</td>
</tr>
<tr>
<td>Specific target organ toxicity</td>
<td>Category 2</td>
<td>H373</td>
</tr>
<tr>
<td>(Blood, Liver, Thymus, repeated exposure)</td>
<td>Category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Skin, corrosion/irritation</td>
<td>Category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Chronic hazards to the aquatic environment</td>
<td>Category 2</td>
<td>H411</td>
</tr>
</tbody>
</table>

LABEL ELEMENTS

Pictogram:

Signal Word: Danger

Physical Hazard Statements:
H227 Combustible liquid; will ignite on surface at temperatures above auto-ignition temp.

Health Hazard Statements:
H304 May be fatal if swallowed and enters airways.
H350 May cause cancer.
H332 Harmful if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H315 Causes skin irritation.

Environmental Hazard Statements:
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:
Prevention: P280: Wear protective gloves/protective clothing/eye protection/face protection
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

Response: P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.

Disposal: P501 Dispose of contents/containers to an approved waste management company or reclaimer.

Unclassified hazards: Vapors in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature where vapor concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>%wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel Fuel, A distillate oil having a minimum viscosity of 32.6 SUS at 37.7.degrees.C (100.degrees.F) to a maximum of 40.1 SUS at 37.7.degrees.C (100.degrees.F)</td>
<td>68476-34-6</td>
<td>100</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0-1.0</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>&lt;0.2</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>0-0.1</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0-0.1</td>
</tr>
<tr>
<td>1,2,4 Trimethylbenzene</td>
<td>95-63-6</td>
<td>0-0.1</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0-1.0</td>
</tr>
<tr>
<td>Cumene</td>
<td>98-82-8</td>
<td>0-0.1</td>
</tr>
</tbody>
</table>
Section 4 - First Aid Measures

Eye Contact: Flush with water for at least 20 minutes. Seek medical attention.

Skin Contact: Remove any contaminated clothing and wash with soap and water at least 20 minutes. Launder or dry-clean clothing before reuse.

Inhalation: Move to fresh air. If breathing is irregular or has stopped, start resuscitation, and then administer oxygen if available. Seek medical attention.

Ingestion: Do not induce vomiting. Vomiting may cause aspiration into lungs. If spontaneous vomiting is about to occur, place victim’s head below knees. Seek medical attention.

After first aid, get appropriate in-plant, paramedic, or community medical support. Section Ref. (4)

Section 5 - Fire-Fighting Measures

Flash Point: >140°F
Flash Point Method: PM
Autoignition Temperature: 500 F
LEL: 0.9
UEL: 7.0

Emergency Response Guide: Guide No. 128
Flammability Classification: Combustible liquid
Extinguishing Media: Extinguish with dry chemical, CO2, foam and water fog. Solid streams of water may be ineffective. Cool affected containers and vessels with flooding quantities of water. Apply water from as great a distance as possible. Keep run off water out of sewers and water sources. Minimize breathing of gases, vapor, fumes, or decomposition products. Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed.

Unusual Fire or Explosion Hazards: Do not store near strong oxidants or open flame.
Hazardous Combustion Products: Under fire conditions – May form toxic materials; carbon dioxide and monoxide, oxides of sulfur and H2S, and other decomposition products, in the case of incomplete combustion.

Fire-Fighting Instructions: Extinguish with dry chemical, CO2, foam and water fog. Solid streams of water may be ineffective. Cool affected containers and vessels with flooding quantities of water. Apply water from as great a distance as possible. Keep run off water out of sewers and water sources. Minimize breathing of gases, vapor, fumes, or decomposition products.

Special Fire-Fighting Procedures: Use self-contained breathing apparatus for enclosed or confined spaces or as otherwise needed. Cool exposed containers and vessels with water. Section Ref. (4, 9, 10)

Section 6 - Accidental Release Measures

“FOR CHEMICAL EMERGENCY” Spill, Leak, Fire, Exposure or Accident
CALL CHEMTREC – Day or Night  800-424-9300

Spill /Leak Procedures: Shut off sources of ignition. Shut off leak, if possible without risk. Take up with sand or other non-combustible, absorbent material.

Small Spills: Take up with an absorbent material and place in containers, seal tightly for proper disposal.

Large Spills: Isolate the hazard area and restrict entry to unnecessary personnel. Shut off source of leak only if it can be done so safely or dike and contain the spill. Keep run off out of sewers and water sources. Wear appropriate respirator and protective clothing. If possible remove product with vacuum trucks. Soak up residue with sand or other suitable material, place in containers for proper disposal. Local, state and federal disposal regulations must be followed.

Regulatory Requirements: Report any spills that could reach any surface waters to the U.S. Coast Guard National Response Center (800) 424-8802. Section Ref. (4)

Section 7 - Handling and Storage

Handling Precautions: Do not handle or store near heat, sparks, or flame.
Storage Requirements: Do not store near strong oxidants or open flames. Avoid water contamination.
Advisement on Prevention Against Fire and Explosion: Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or
other containers. Precautions to prevent static-initiated fire or explosion during transfer, storage or handling, include
but are not limited to these examples:
(1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to
prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators.
(2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can
exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash
point products (such gasoline or naphtha).
(3) Storage tank level floats must be effectively bonded. For more information on precautions to prevent static-
initiated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API
recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents
(2008).

### Section 8 - Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA PEL TWA</th>
<th>ACGIH TLV TWA</th>
<th>NIOSH REL TWA</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel Fuel</td>
<td></td>
<td>100 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polynuclear aromatics</td>
<td>0.2 g/m³</td>
<td>0.2 mg/m³</td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>10 ppm</td>
<td>10 ppm</td>
<td>15 ppm</td>
<td>250 ppm</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>125 ppm</td>
<td>800 ppm</td>
</tr>
<tr>
<td>Xylenes</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td>150 ppm</td>
<td>900 ppm</td>
</tr>
<tr>
<td>Toluene</td>
<td>200 ppm</td>
<td>300 ppm</td>
<td>20 ppm</td>
<td>500 ppm</td>
</tr>
<tr>
<td>1,2,4 Trimethylbenzene</td>
<td>N. D.</td>
<td>25 ppm</td>
<td>25 ppm</td>
<td>N. D.</td>
</tr>
<tr>
<td>Cumene</td>
<td>50 ppm</td>
<td>50 ppm</td>
<td>50 ppm</td>
<td>900 ppm</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>300 ppm</td>
<td>100 ppm</td>
<td>300 ppm</td>
<td>1300 ppm</td>
</tr>
</tbody>
</table>

### Engineering Controls

**Ventilation:** General mechanical with local exhaust; sufficient to maintain exposure levels below recommended TLV.

**Protective Clothing/Equipment**

**Gloves:** Use chemical resistant gloves resistant to distillate to avoid prolonged or repeated skin contact.

**Goggles:** Chemical-type goggles or face shield.

**Respiratory:** Self-contained, positive-pressure breathing apparatus when used in confined or enclosed space or
when exposure limits are exceeded. Organic vapor respirators can be used with good ventilation when organic
vapors are less than 1000 ppm or ten (10) times permissible exposure limit, which ever is less.

### Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance and Odor:** Yellow-Green color with distinct hydrocarbon odor

**Odor Threshold:** No Data

**Vapor Pressure:** 0.19 psi @ 100°F

**Vapor Density (Air=1):** 4+

**Formula Weight:** No Data

**Density:** No Data

**Specific Gravity (H₂O=1, at 4°C):** 0.83 –0.86

**pH:** No Data

**Water Solubility:** Negligible

**Other Solubilities:** No Data

**Boiling Point:** 320°F - 680°F

**Viscosity:** 2.6 cst @ 40°C

**Refractive Index:** No Data

**Surface Tension:** No Data

**% Volatile:** <2

**Evaporation Rate:** 0.02 (Butyl Acetate = 1)
Section 10 - Stability and Reactivity

**Stability:** Material is stable.

**Polymerization:** Will not occur.

**Chemical Incompatibilities:** Do not store near strong oxidants.

**Conditions to Avoid:** Do not store near open flames.

**Hazardous Decomposition Products:** Under fire conditions – May form toxic materials; carbon dioxide and monoxide, oxides of sulfur and nitrogen, H2S, and other decomposition products, in the case of incomplete combustion.

Section Ref. (10)

Section 11 - Toxicological Information

**Toxicity by ingestion:** Grade 1; LD50 = 5–15 g/kg

**Skin-Rabbit, adult** 500 mg Moderate irritation effects

National Technical Information Service. (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information)NTIS** AD-A172-198

**Oral-Rat** LD50: 9 g/kg


**Skin-Mouse** TDLo: 243 g/kg/97W-I: Carcinogenic effects

Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1981-FAATDF 9, 297, 87

**Diesel Exhaust:**

**Inhalation-Rat** TCLo: 4900 mg/m³/8H/2Y-C: Carcinogenic effects

Developments in Toxicology and Environmental Science. (Elsevier, Scientific Publishing Co., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977-DTESD7 13, 349, 86

**Inhalation-Rat** TC: 7 mg/m³/7H/2Y-I: Carcinogenic effects

Fundamental and Applied Toxicology. (Academic Press, Inc., 1 E. First St., Duluth, MN 55802) V.1- 1981-FAATDF 9, 208, 87

**Inhalation-Rat** TCLo: 2200 mg/m³/16H/2Y-I: Neoplastic effects

Developments in Toxicology and Environmental Science. (Elsevier, Scientific Publishing Co., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1977-DTESD7 13, 471, 86

**Inhalation-Rat** TC: 8300 mg/kg/6H/86W-I: Equivocal tumorigenic agent


**Inhalation-Rat** TC: 8300 mg/m³/6H/86W-I: Equivocal tumorigenic agent


**Inhalation-Rat** TC: 7 mg/m³/7H/2Y-I: Equivocal tumorigenic agent


Section Ref. (5, 10)

Section 12 - Ecological Information

**Ecotoxicity:**

Dangerous to aquatic life in high concentrations.

Fouling to shoreline.

May be dangerous if it enters water intakes.

Notify local health and wildlife officials.

Notify operators of nearby water intakes

**Aquatic toxicity:** 204 mg/l/24 hr/juvenile American shad/TLm/salt water.

**Waterfowl toxicity:** more than 20 ml/kg/LD50/mallards

Section Ref. (10)
Section 13 - Disposal Considerations

Disposal: Local, state and federal disposal regulations must be followed.

Container Cleaning and Disposal: “Empty” Container Warning: “Empty” containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):
The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description information.

Transportation Information for Bulk Shipments

DOT Shipping Name: Diesel Fuel
DOT Hazard Class: 3
DOT ID No.: UN 1202
DOT Packing Group: III
Hazard Label: Flammable Liquid

Section 15 - Regulatory Information

CERCLA Reportable Quantity (RQ) (40 CFR 302.4):

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>1000</td>
</tr>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>100</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>1000</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>1000</td>
</tr>
<tr>
<td>1,2,4 Trimethylbenzene</td>
<td>95-63-6</td>
<td>NA</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>100</td>
</tr>
<tr>
<td>Cumene</td>
<td>98-82-8</td>
<td>5000</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th>Fire</th>
<th>Pressure</th>
<th>Reactivity</th>
<th>Immediate (acute)</th>
<th>Delayed (chronic)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

SARA Toxic Chemical (40 CFR 372) Section 313:

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>0.1</td>
</tr>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>0.2</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>0.1</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0.1</td>
</tr>
<tr>
<td>1,2,4 Trimethylbenzene</td>
<td>95-63-6</td>
<td>0.1</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>1.0</td>
</tr>
<tr>
<td>Cumene</td>
<td>98-82-8</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): None
TSCA (40 CFR 710): All components of this product are listed on the TSCA Inventory.
State Regulations: The following chemicals are specifically listed by individual states, for details on each states regulatory requirements you should contact the appropriate agency in that state.

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>CA, CA65, MA, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>Xylenes (mixed isomers)</td>
<td>1330-20-7</td>
<td>CA, MA, NY, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>CA, MA, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>CA, MA, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>1,2,4 Trimethylbenzene</td>
<td>95-63-6</td>
<td>MA, TX, FL, PA</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>CA, MA, NJ, TX, FL, IL, PA</td>
</tr>
<tr>
<td>Cumene</td>
<td>98-82-8</td>
<td>CA, MA, NJ, TX, FL, IL, PA</td>
</tr>
</tbody>
</table>

CA – CALIFORNIA STATE SUPERFUND HAZARDOUS SUBSTANCE
CA65 – CALIFORNIA PROPOSITION 65 CARCINOGENS OR REPRODUCTIVE TOXINS
MA – MASSACHUSETTS SUBSTANCE LIST
NY – NEW YORK HAZARDOUS SUBSTANCE BULK STORAGE LIST
NJ – NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE
TX – TEXAS AIR CONTAMINANTS WITH HEALTH EFFECTS SCREENING LEVEL
FL – FLORIDA TOXIC SUBSTANCE LIST
IL – TOXIC SUBSTANCE DISCLOSURE TO EMPLOYEES LIST
PA – PENNSYLVANIA HAZARDOUS SUBSTANCE LIST

SECTION 16 - Other Information

Prepared By: Lion Oil Control Lab
Revision Notes
06-11-2013- GHS update
04-04-2011-Moved Sections 2 and 3.

Hazardous Materials Information System (U.S.A.)

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>H – Health</td>
</tr>
<tr>
<td>F</td>
<td>F – Fire Hazard</td>
</tr>
<tr>
<td>PH</td>
<td>PH – Physical Hazard</td>
</tr>
</tbody>
</table>

PPE†
†Sec. 8

* Chronic Hazard - Chronic (long-term) health effects may result from repeated over exposure.

National Fire Protection Association

NFPA Label

Fire Hazard (red)
Flash Point Temp.
4 – below 73°F - v.flam.
3 – 73 to 100°F - flam.
2 – 101 to 200°F-comb.
1 – over 200°F–slightly combustible
0 – will not burn

Reactivity (yellow)
4 – may detonate
3 – shock or heat may detonate
2 – violent chem. reaction
1 – unstable if heated
0 – stable
**Disclaimer:** LION OIL COMPANY PROVIDES THIS INFORMATION FOR THE USER'S CONSIDERATION. LION OIL COMPANY BELIEVES THIS INFORMATION IS ACCURATE, BUT NOT ALL INCLUSIVE IN ALL CIRCUMSTANCES. USER SHOULD ENSURE THAT USER HAS CURRENT DATA RELEVANT FOR ITS PURPOSES. NO WARRANTY, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY, FITNESS OR OTHERWISE IS GIVEN.

**Product Name:** Ultra Low Sulfur Diesel

**Pictogram:**

Unclassified hazards: May ignite on surfaces at temperatures above auto-ignition temperature. Vapors in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature where vapor concentrations are within the flammability range. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

**Signal Word:** Danger

**Avoid Prolonged Breathing of Mist or Spray.** Average exposure to airborne mist for an 8-hour workday should not exceed 5.0 milligrams of mist per cubic meter of air.

**Avoid Eye and Skin Contact:** Wear oil-impervious protective clothing. If clothes become contaminated, change to clean clothing after thoroughly washing exposed skin with soap and warm water.

**FIRST AID**

**Inhalation:** If overcome by fumes, remove from exposure immediately and call a physician.

**Skin:** Wash with warm water and soap until the exposed area is clean.

**Eyes:** Flush with water for at least fifteen (15) minutes. See physician if symptoms persist.

**Ingestion:** Do not induce vomiting. Obtain medical assistance. Small amounts that accidentally enter through the mouth should be rinsed out until no taste of it remains.

**FIRE CONTROL**

Use water spray or fog, chemical foam, dry powder or carbon dioxide.
Reference and research:


(2) NIOSH Pocket Guide to Chemical Hazards - http://www.cdc.gov/niosh/npg/

(3) 2007 Guide to Occupational Exposure Values – Compiled by ACGIH


(6) Touchstone Environmental, Inc.; Chemcheck Handbook (educational resource)


(8) Environmental Contaminant Reference Databook; VOLUMES I, II and III; by Jan. C. Prager; Version 2.0; Copyright © 1997 by John Wiley & Sons, Inc.


(10) Hazardous Materials Handbook; Richard P. Pohanish and Stanley A. Greene, Version 1.3 Copyright© 1997 by Richard P. Pohanish and Stanley A. Greene